

**TRANSMITTAL OF APPEAL BRIEF (Large Entity)**Docket No.  
ITL1040USIn Re Application Of: **Sarah E. Kim**

MAR 26 2007

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/669,205	September 24, 2003	Stanetta D. Isaac	21906	2812	2630

Invention: **Integrated Re-Combiner for Electroosmotic Pump Using Porous Frits****COMMISSIONER FOR PATENTS:**

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:  
**January 19, 2007**

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Dated: **March 23, 2007**

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In re Applicant:

Sarah E. Kim, et al.

Serial No.: 10/669,205

Filed: September 24, 2003

For: Integrated Re-Combiner for  
Electroosmotic Pump Using  
Porous Frits

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Art Unit: 2812

Examiner: Stanetta D. Isaac

Atty Docket: ITL1040US  
(P14807)

Assignee: Intel Corporation

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### **APPEAL BRIEF**

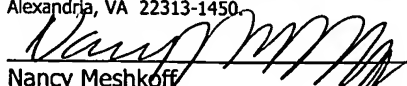
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Nancy Meshkoff

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### **REAL PARTY IN INTEREST**

The real party in interest is the assignee Intel Corporation.

**RELATED APPEALS AND INTERFERENCES**

None.

### **STATUS OF CLAIMS**

Claims 1-13 (Canceled).

Claim 14 (Rejected).

Claim 15 (Canceled).

Claims 16-17 (Rejected).

Claims 18-21 (Canceled).

Claims 14, 16, and 17 are rejected and are the subject of this Appeal Brief.

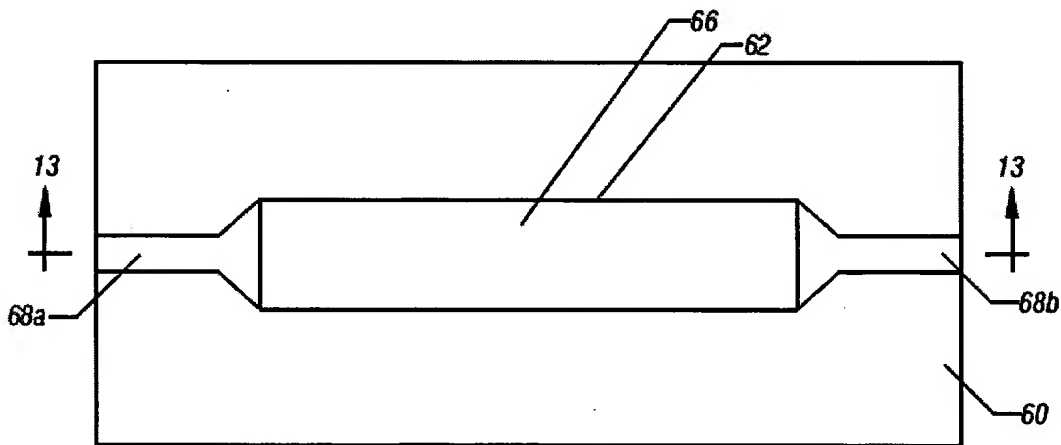
## **STATUS OF AMENDMENTS**

All amendments have been entered.

## SUMMARY OF CLAIMED SUBJECT MATTER

In the following discussion, the independent claims are read on one of many possible embodiments without limiting the claims:

14. A method comprising:
- forming a trench (Figure 10, 62) in an integrated circuit substrate (Figure 10, 60) (specification at page 9, lines 7-12);
  - lining the trench with a catalyst material (Figure 10, 64) to remove gases from a circulating fluid (specification at page 9, lines 13-18);
  - forming channels (Figure 12, 68a, 68b) that align with said trench to allow fluid circulation completely across said substrate from one side of said substrate to the other and through said trench (specification at page 10, line 22 to page 11, line 5); and
  - protecting said catalyst when forming said channels (specification at page 10, lines 3-8).



**FIG. 12**

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.



**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

- A. Whether claim 14 is anticipated under 35 U.S.C. § 102(e) by Arik (US 6,864,571).**
- B. Whether claims 16 and 17 are unpatentable under 35 U.S.C. § 103(a) over Arik (US 6,864,571).**

## **ARGUMENT**

### **A. Is claim 14 anticipated under 35 U.S.C. § 102(e) by Arik (US 6,864,571)?**

#### **1. Does Arik Teach Use of a Catalyst to Remove Gases from a Circulating Liquid?**

The claim requires a catalyst material to remove gases from the circulating liquid. The catalyst material in the cited reference is a catalyst that causes carbon nanotubes to grow. See column 3, lines 21-35.

The final rejection notes that liquid is evaporated in the catalyst lined trenches. But the catalyst has nothing whatsoever to do with that evaporation. Thus, the catalyst is not to remove gases from the circulating liquid, but, rather, merely to grow carbon nanotubes. The fact that the catalyst for growing carbon nanotubes is there when liquid naturally evaporates off is of no moment since the claimed limitation is not met.

Therefore the rejection should be reversed.

#### **2. Does Arik Teach Channels that Align with the Trench to Allow Fluid Circulation Completely Across the Substrate from One Side of the Substrate to the Other and Through the Trench?**

The claim requires channels that align with the trench to allow fluid circulation completely across the substrate.

The Examiner suggests that the grooves can be formed on both the top and the bottom of the combined substrates. But, even if this is so, the groove is already shown in only one of the two opposed substrates. Forming the trench partially in the top substrate and partially in the bottom does not extend the sideways length of the trench. It is still too short, as it was before, even if this modification were attempted.

Further, it is suggested that Arik implies that the grooves would have been formed across either wafer from side to side since the fluid flows through the channels formed within the grooves. But this is incorrect. The length of the channels is better shown in Figure 4. They merely radiate outwardly from the center, but do not go completely across the substrate, as indisputably shown there.

Reversal is requested for this additional reason.

**3. Does Arik Teach Protecting the Catalyst When Forming the Channels?**

The claim also requires protecting the catalyst when forming the channels.

Arik teaches using a material to define the position of the catalyst. For example, that material may be spread apart and may have openings where the catalyst goes. Thus, any place where the catalyst overlaps the material, the catalyst is removed and anywhere else it stays. But, necessarily, that material cannot protect the catalyst when forming the channels because that material is only in the places where the catalyst does not end up. As a result, it leaves the catalyst always unprotected and, necessarily, the catalyst is unprotected when forming the channels. Moreover, it appears that the channels are formed before the catalyst is deposited.

For all these reasons, the rejection should be reversed.

**B. Are claims 16 and 17 unpatentable under 35 U.S.C. § 103(a) over Arik (US 6,864,571)?**

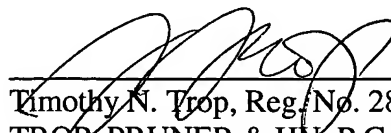
For the reasons above, the rejection of claims 16 and 17 should also be reversed.

\* \* \*

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: March 23, 2007



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## **CLAIMS APPENDIX**

The claims on appeal are:

14. A method comprising:  
forming a trench in an integrated circuit substrate;  
lining the trench with a catalyst material to remove gases from a circulating fluid;  
forming channels that align with said trench to allow fluid circulation completely  
across said substrate from one side of said substrate to the other and through said trench; and  
protecting said catalyst when forming said channels.
16. The method of claim 14 including depositing platinum as said catalyst in said  
trench.
17. The method of claim 14 including depositing lead in said trench as said catalyst.

## **EVIDENCE APPENDIX**

None.

**RELATED PROCEEDINGS APPENDIX**

None.